PATENT COOPERATION TREATY

| | From the INTERNATIONAL BUREAU |
|---|---|
| PCT | То: |
| NOTIFICATION OF ELECTION (PCT Rule 61.2) | United States Patent and Trademark Office (Box PCT) Crystal Plaza 2 Washington, DC 20231 ETATS-UNIS D'AMERIQUE |
| Date of mailing (day/month/year) 03 March 1997 (03.03.97) | in its capacity as elected Office |
| International application No. PCT/GB96/01773 | Applicant's or agent's file reference |
| International filing date (day/month/year) | Priority date (day/month/year) |
| 24 July 1996 (24.07.96) | 26 July 1995 (26.07.95) |
| Applicant · | |
| HALL, Harold | |
| 1. The designated Office is hereby notified of its election made X in the demand filed with the International Preliminary 14 February 19 in a notice effecting later election filed with the International Preliminary 2. The election X was was not | Examining Authority on: |
| made before the expiration of 19 months from the priority of Rule 32.2(b). | late or, where Rule 32 applies, within the time limit under |

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland

Authorized officer

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Facsimile No.: (41-22) 740.14.35

PATENT COOPERATION TREATY

PCT

1 4 AUG 1997 REC'D POT WIPO

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

| Applicant's or agent's file reference | FOR FURTHER ACTION | | n of Transmittal of International camination Report (Form PCT/IPEA/416) |
|---|--|-------------------------|--|
| International application No. | International filing date (dayir | nonthiyear) | Priority date (day/month/year) |
| PCT/GB 96/01773 | 24/07/1996 | | 26/07/1995 |
| International Patent Classification (IPC) or | national classification and IPC | | |
| | B03C1/033 | | |
| Applicant MARLOWE, John et al. | | | |
| This international preliminary exar Authority and is transmitted to the This REPORT consists of a tota This report is also accompan | applicant according to Article 3 | 6. this cover sheet. | tional Preliminary Examining , claims and/or drawings which have |
| been amended and are the ba | sis for this report and/or sheets 607 of the Administrative Instruc | containing rectific | ations made before this Authority |
| 3. This report contains indications an | | the following ite | ems: |
| I X Basis of the report | er control comments | | |
| II Priority | | | |
| | ppinion with regard to novelty, in | ventive step and i | industrial applicability |
| IV Lack of unity of invent | | venerve step mie | massi air approudincy |
| V Reasoned statement un | der Article 35(2) with regard to rons supporting such statement | novelty, inventive | step or industrial applicability; |
| VI Certain documents cite | d | | |
| VII Certain defects in the in | | | |
| ~~~ ~~~ | n the international application | | |
| 23 | | | |
| | _ | | |
| Date of submission of the demand | Date | of completion of | this report |
| 14/02/1997 | | · 1 | 2. 08. 97 |
| Name and mailing address of the IPEA/ | Autho | orized officer | 1 |
| European Patent Office D-80298 Munich Tel. (+49-89) 2399-0, Tx: 5236 Fax: (+49-89) 2399-4465 | | | Ch. Tompouloglou |
| Form PCT IDE A 100 (cover sheet) (January | | none No. | |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

| I. Basis of the report | |
|--|--|
| This report has been drawn up on the basis of (Replace Office in response to an invitation under Article 14 a not annexed to the report since they do not contain an | are referred to in this report as "originally filed" and are |
| [] the international application as originally fil | Led. |
| [x] the description, pages 1-7 | , as originally filed, |
| | , filed with the demand, |
| | , filed with the letter of, |
| - · | , filed with the letter of, |
| [x] the claims, Nos. | , as originally filed, |
| Nos | , as amended under Article 19, |
| Nos | , filed with the demand, |
| Nos. 1-11 | , filed with the letter of 25/7/97_, |
| Nos | , filed with the letter of, |
| [x] the drawings, sheets/fig 1/3-3/3 | , as originally filed, |
| sheets/fig | , filed with the demand, |
| sheets/fig | , filed with the letter of |
| sheets/fig | , filed with the letter of |
| 2. The amendments have resulted in the cancellation of: | |
| [] the description, pages | • |
| [] the claims, Nos | · |
| [] the drawings, sheets/fig | <u> </u> |
| · | |
| 3. [] This report has been established as if (some of) | the amendments had not been made, since they have been |
| considered to go beyond the disclosure as filed | (Rule 70.2(c)): |
| 4. Additional observations, if necessary: | |
| | |
| | |
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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

| V. Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement | | |
|---|-------------------|--|
| 1. STATEMENT | | |
| Novelty (N) | Claims 1-11Claims | |
| Inventive Step (IS) | Claims 1-11Claims | |
| Industrial Applicability (IA) | Claims 1-11Claims | |

2. CITATIONS AND EXPLANATIONS

1. D1: US-A-2149764 is the closest prior art and discloses: a device (5) for filtering ferromagnetic material from a fluid in which said material is suspended, comprises a magnet (9) and a pair of metal plates (8), said magnet having faces of opposite magnetic polarity, said plates being disposed in abutment with said faces respectively (fig. 19, each plate having a plurality of recesses (22) about an outer perimeter of the plate to form radially extending magnetic pole pieces, which extend beyond an outer perimeter of the magnetic faces (fig. 1), said plates being oriented so that the recesses and pole pieces on one plate are axially aligned with those recesses and pole pieces on the other plate (fig. 1), wherein axially opposite recesses define passage means for said fluid and also regions from which ferromagnetic material is repelled, and wherein said pole pieces define regions to which ferromagnetic material is attracted and retained (page 2, left column). said device being further provided with a distribution plate (uppermost plate (8)) having a plurality of apertures which are axially alignable with said recesses, said apertures being the only passage means of fluid to said metal plates.

- 2. Problem: To increase the separation efficiency in this context.
- 3. Solution: The tube according to the characterising portion of the independent claim isolates the input of the device form the clean product.
- 4. The threaded tube (18) disclosed in D3: US-A-5389252 is intended only as an exit of the clean product.

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

- 1. Reference signs in parentheses should have been inserted in the claims to increase their intelligibility, Rule 6.2(b) PCT. This applies to both the preamble and characterising portion.
- 2. To meet the requirements of Rule 5.1(a)(ii) PCT, the documents D1, D2: FR-A-1114135 and D3 should be identified in the description and the relevant background art disclosed therein should be briefly discussed.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

 Claim 11 includes all features of claim 1 and should therefore have been drafted as dependent claim (Rule 6.4(a)-(c) PCT).

Form PCT/IPEA/409 (sheet 5) (January 1994)

P. L.

PATENT COOPERATION TREATY PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| Applicant's or agent's file reference | FOR FURTHER see Notification of (Form PCT/ISA/ | f Transmittal of International Search Report 220) as well as, where applicable, item 5 below. |
|--|---|--|
| International application No. | International filing date(day/month/year) | (Earliest) Priority Date (day/month/year) |
| PCT/GB 96/01773 | 24/07/1996 | 26/07/1995 |
| Applicant | | |
| MARLOWE, John . | | |
| This International Search Report has be according to Article 18. A copy is being | en prepared by this International Searching Aut transmitted to the International Bureau. | hority and is transmitted to the applicant |
| This International Search Report consis | ts of a total of <u>2</u> sheets. py of each prior art document cited in this repo | rt. |
| 1. Certain claims were found unse | archable (see Box I). | |
| 2. Unity of invention is lacking (so | ee Box II). | |
| 3. The international application c international search was carrie | ontains disclosure of a nucleotide and/or amino and out on the basis of the sequence listing | acid sequence listing and the |
| | ed with the international application. | |
| fui | nished by the applicant separately from the inte | rnational application, |
| | but not accompanied by a statement to the matter going beyond the disclosure in the | e effect that it did not include international application as filed. |
| T r | anscribed by this Authority | |
| 4. With regard to the title, X the | text is approved as submitted by the applicant | |
| | text has been established by this Authority to r | ead as follows: |
| | | |
| | | · |
| | | |
| 5. With regard to the abstract, | and is a supplied by the applicant | |
| نکا | text is approved as submitted by the applicant text has been established, according to Rule 38 | 2(b), by this Authority as it appears in |
| □ Bo | x III. The applicant may, within one month from arch Report, submit comments to this Authority | m the date of mailing of this International |
| | | |
| 6. The figure of the drawings to be put | | None of the figures. |
| <u> </u> | suggested by the applicant. | None of the figures. |
| - | cause the applicant failed to suggest a figure. cause this figure better characterizes the invention | n |
| bec | zause uns figure better characterizes the inventio | ••• |
| | | |

| A. CLASSI | FICATION OF SUBJECT MATTER B03C1/033 B01D35/06 | • | |
|------------------------------|---|--|---|
| - | - | | - |
| According t | o International Patent Classification (IPC) or to both national classifi | cation and IPC | |
| | SEARCHED | | |
| Minimum d IPC 6 | locumentation searched (classification system followed by classification B03C | on symbols) | |
| Documenta | tion searched other than minimum documentation to the extent that st | uch documents are included in the fields so | earched |
| Electronic d | data base consulted during the international search (name of data base | and, where practical, search terms used) | |
| C. DOCUM | MENTS CONSIDERED TO BE RELEVANT | | |
| Category * | Citation of document, with indication, where appropriate, of the rel | levant passages | Relevant to claim No. |
| X | US,A,2 149 764 (J.R.FREI) 7 March see column 1, line 51 - column 2, claims 1-3; figures 1-3 | 1939 line 7; | 1,2,6,8 3 |
| X | FR,A,1 114 135 (N.V.PHILIPS GLOEILAMPENFABRIEKEN) 9 April 1956 see page 1, column 2, paragraph 7 - page 2, column 1, paragraph 1; figure 1 | | 1 |
| A | GB,A,684 052 (H.SPODIG) 10 Decemb see page 3, line 40 - line 86; cl 1,4,7; figure 17 | er 1952 aims | 1,5 |
| А | US,A,5 389 252 (MORRICK ROBERT A) February 1995 see column 2, line 15 - column 3, claims 1,3; figures 1-3 | | 1-3,11, 13 |
| Fu | rther documents are listed in the continuation of box C. | X Patent family members are listed | in annex. |
| * Special c | ategories of cited documents: | "T" later document published after the int or priority date and not in conflict w | ernational filing date |
| consi "E" earlie | ment defining the general state of the art which is not dered to be of particular relevance recomment but published on or after the international date | cited to understand the principle or the invention "X" document of particular relevance; the cannot be considered novel or ca | neory underlying the claimed invention t be considered to |
| which citati "O" docur | nent which may throw doubts on priority claim(s) or his cited to establish the publication date of another on or other special reason (as specified) ment referring to an oral disclosure, use, exhibition or means | involve an inventive step when the do "Y" document of particular relevance; the cannot be considered to involve an it document is combined with one or m ments, such combination being obvious | ocument is taken alone claimed invention eventive step when the hore other such docu- |
| "P" docur | ment published prior to the international filing date but | in the art. "&" document member of the same paten | t family |
| Date of th | e actual completion of the international search | Date of mailing of the international se | earch report |
| | 4 November 1996 | 0 8. | 11. 96 |
| Name and | i mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 | Authorized officer | |
| | NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 | Decanniere, L | |

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RNATIONAL SEARCH REPORT

ormation on patent family members

PCT/GB 96/01773

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|--|---------------------|----------------------------|---------------------|
| US-A-2149764 | 07-03-39 | NONE | |
| FR-A-1114135 | | NONE | :_ |
| GB-A-684052 | | NONE | |
| US-A-5389252 | 14-02-95 | NONE | |